CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
# 4, 7TH MAIN MALLESWARAM, BANGALORE -3

# TEST RESULTS OF GRADATION FOR WMM

| | | |
|---|---|---|
| **Lab ID** | : | **CP-RW-2019-03-28-100** **Date: 12-01-19** |
| **Customer** | : | Assistant Executive Engineer, T.Dasarahalli Sub Division, BBMP, Bangalore. |
| **Address** | : | T.Dasarahalli Sub Division, BBMP, Bangalore. |
| **Project Name** | : | Reserve Found For Emergency Works in Bangalagunte in Ward No.14 |
| **Agency** | : | Sri.G.N Ramesh, #04, 3rd Main, 7th Cross, Gandhigrama, Maruthi Extension, Bangalore-21 |
| **Customer Reference** | : | EE/DD/WO/ /18-19 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 10-01-19 |
| **Type of Mix** | : | WMM ( Wet Mix Macadam) |
| **Date of test** | : | 10-01-19 |
| **Oven Dry Weight** | : | 11000 Grams |

| IS Sieve Size(mm) | Weight Retained (gm) | Cumulative Weight Retained (gm) | % Cumulative Weight Retained | % Passing | Spec.I.Vide Table 400.13 MORTH Specification |
|---|---|---|---|---|---|
| 53 | 0 | 0 | 0.0 | 100.0 | 100 |
| 45 | 315 | 315 | 2.9 | 97.1 | 95-100 |
| 22.4 | 2259 | 2574 | 23.4 | 76.6 | 60-80 |
| 11.2 | 2179 | 4753 | 43.2 | 56.8 | 40-60 |
| 4.75 | 2251 | 7004 | 63.7 | 36.3 | 25-40 |
| 2.36 | 1621 | 8625 | 78.4 | 21.6 | 15-30 |
| 0.6 | 623 | 9248 | 84.1 | 15.9 | 8-22 |
| 0.075 | 1338 | 10586 | 96.2 | 3.8 | 0-5 |

**Note:-**

The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

**FOR CIVIL Pro.**

**R KARTHIK RECHAN**
**Authorized Signatory**
**Quality Manager**

CIVIL PRO Sig..... Date..... BANGALORE

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಟಿ. ದಾಸರಹಳ್ಳಿ ಉಪ ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿ.ಬಿ.ಎಂ.ಪಿ.
ಬೆಂಗಳೂರು-560073.

*End of Report*

# TEST REPORT OF AGGEGRATE IMPACT VALUE
## IS: 2386 Part IV

| | | | |
|---|---|---|---|
| **Lab ID** | : | **CP-RW-2019-03-28-100** | **Date: 12-01-19** |
| **Customer** | : | Assistant Executive Engineer, T.Dasarahalli Sub Division, BBMP, Bangalore. | |
| **Address** | : | T.Dasarahalli Sub Division, BBMP, Bangalore. | |
| **Project Name** | : | Reserve Found For Emergency Works in Bangalagunte in Ward No.14 | |
| **Agency** | : | Sri.G.N Ramesh, #04, 3rd Main, 7th Cross, Gandhigrama, Maruthi Extension, Bangalore-21 | |
| **Customer Reference** | : | EE/DD/WO/ /18-19 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Sample Condition** | : | Satisfactory | |
| **Date of Receipt** | : | 10-01-19 | |
| **Type of Mix** | : | Coarse Aggregate for WMM ( Wet Mix Macadam) | |
| **Date of test** | : | 10-01-19 | |

| Sl.No | Particulars of observations | Index | TEST 1 | TEST 2 |
|---|---|---|---|---|
| 1 | Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve) | A | 300.2 | 300.2 |
| 2 | Weight of fraction passing 2.36mm sieve After giving 15 blows | B | 73.9 | 74.0 |
| 3 | weight of fraction retained 2.36mm sieve After giving 15 blows | C | 225.9 | 225.8 |
| 4 | Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made. | A-(B+C) | 0.4 | 0.4 |
| 5 | Aggregate impact value | (B/A)*100 | 24.6 | 24.7 |
| 6 | Aggregate impact value ( Mean of two tests) | Pecentage | 24.6 | |

**Note:-**
The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

**FOR CIVIL Pro.**
**R KARTHIK RECHAN**
**Authorized Signatory**
**Quality Manager**

CIVIL PRO BANGALORE Sig..... Date.....



M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

# TEST RESULTS OF GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2007 )

| | | | |
|---|---|---|---|
| **Lab ID** | : | **CP-RW-2019-03-28-100** | **Date: 23-01-19** |
| **Customer** | : | Assistant Executive Engineer, T.Dasarahalli Sub Division, BBMP, Bangalore. | |
| **Address** | : | T.Dasarahalli Sub Division, BBMP, Bangalore. | |
| **Project Name** | : | Reserve Found For Emergency Works in Bangalagunte in Ward No.14 | |
| **Agency** | : | Sri.G.N Ramesh, #04, 3rd Main, 7th Cross, Gandhigrama, Maruthi Extension, Bangalore-21 | |
| **Customer Reference** | : | EE/DD/WO/ /18-19 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Sample Condition** | : | Satisfactory | |
| **Date of Receipt** | : | 21-01-19 | |
| **Type of Mix** | : | BC-Plant (Bituminous Concrete) | |
| **Date of test** | : | 21-01-19 | |
| **Oven Dry Weight** | : | 5000 | Grams |

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-17(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 89 | 89 | 1.8 | 98.2 | 90-100 |
| 9.5 | 702 | 791 | 15.8 | 84.2 | 70-88 |
| 4.75 | 895 | 1686 | 33.7 | 66.3 | 53-71 |
| 2.36 | 587 | 2273 | 45.5 | 54.5 | 42-58 |
| 1.18 | 492 | 2765 | 55.3 | 44.7 | 34-48 |
| 0.6 | 503 | 3268 | 65.4 | 34.6 | 26-38 |
| 0.3 | 528 | 3796 | 75.9 | 24.1 | 18-28 |
| 0.15 | 458 | 4254 | 85.1 | 14.9 | 12-20 |
| 0.075 | 350 | 4604 | 92.1 | 7.9 | 4-10 |
| PAN | 396 | 5000 | 100 | 0.0 | 0 |

**Note:-**
The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಟಿ. ದಾಸರಹಳ್ಳಿ ಉಪ ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿ.ಬಿ.ಎಂ.ಪಿ.
ಬೆಂಗಳೂರು-560073.

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

CIVIL PRO Sig..... Date..... BANGALORE


*End of Report*

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
# 4, 7TH MAIN MALLESWARAM, BANGALORE -3

# PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

| | | | |
|---|---|---|---|
| **Lab ID** | : | **CP-RW-2019-03-28-100** | **Date: 24-01-19** |
| **Customer** | : | Assistant Executive Engineer, T.Dasarahalli Sub Division, BBMP, Bangalore. | |
| **Address** | : | T.Dasarahalli Sub Division, BBMP, Bangalore. | |
| **Project Name** | : | Reserve Found For Emergency Works in Bangalagunte in Ward No.14 | |
| **Agency** | : | Sri.G.N Ramesh, #04, 3rd Main, 7th Cross, Gandhigrama, Maruthi Extension, Bangalore-21 | |
| **Customer Reference** | : | EE/DD/WO/ /18-19 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Sample Condition** | : | Satisfactory | |
| **Date of Receipt** | : | 21-01-19 | |
| **Type of Mix** | : | BC (Bituminous Concrete) | |
| **Date of test** | : | 21-01-19 | |

**Table 500-16 : Physical Requirements fo Coarse Aggregate for Bituminous Concrete**

| Property | Test | Result | Specification | Method of Test |
|---|---|---|---|---|
| Partical Shape | Flakiness Index | 12.4 | Combined Flakiness & Elongation Index for BC is Maximum 35% | IS:2386 Part I |
| | Elongation Index | 11.8 | | |
| Strength | Aggregate Impact Value | 22.1 | Maximum 24% | IS:2386 Part IV |
| Specific gravity | Specific gravity | 2.68 | Maximum 2.7 | IS:2386 Part III |
| Water Absorption | Water Absorption | 0.21 | Maximum 2% | IS:2386 Part III |

**Note:-**
The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಟಿ. ದಾಸರಹಳ್ಳಿ ಉಪ ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿ.ಬಿ.ಎಂ.ಪಿ.
ಬೆಂಗಳೂರು-560073.

**FOR CIVIL Pro.**

**R KARTHIK RECHAN**
**Authorized Signatory**
**Quallity Manager**

CIVIL PRO BANGALORE Sig..... Date.....



M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

# TESTS RESULTS ON STABILITY OF MIX

| | | |
|---|---|---|
| **Lab ID** | : | **CP-RW-2019-03-28-100** **Date: 24-01-19** |
| **Customer** | : | Assistant Executive Engineer, T.Dasarahalli Sub Division, BBMP, Bangalore. |
| **Address** | : | T.Dasarahalli Sub Division, BBMP, Bangalore. |
| **Project Name** | : | Reserve Found For Emergency Works in Bangalagunte in Ward No.14 |
| **Agency** | : | Sri.G.N Ramesh, #04, 3rd Main, 7th Cross, Gandhigrama, Maruthi Extension, Bangalore-21 |
| **Customer Reference** | : | EE/DD/WO/ /18-19 |
| **Source of Sample** | : | Hot Mix Plant, Bangalore |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 21-01-19 |
| **Type of Mix** | : | BC (Bituminous Concrete) |
| **Date of test** | : | 21-01-19 |

**The results of the tests conducted on the Bituminous Concrete mix sample are as follow**

| Sl.No | Particulars of observations | TEST 1 | TEST 2 | Secified limits as per MORTH specification table 500-11 |
|---|---|---|---|---|
| 1 | Marshal Stability at 60°C, KN | 11.14 | 11.13 | 10KN(min) |
| 2 | Marshal flow at 60°C, mm | 3.52 | 3.51 | 2-4 |
| 3 | Percent air Voids | 4.82 | 4.83 | 3-5 |
| 4 | Percent Voids in mineral Aggregate(VMA %) | 14.28 | 14.26 | 13-15 |
| 5 | Percent Voids filled with Bitumen(VFB %) | 71.87 | 71.63 | 65-75 |
| 6 | Density, g/cc | 2.25 | 2.26 | – |

**Note:-**

The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಟಿ. ದಾಸರಹಳ್ಳಿ ಉಪ ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿ.ಬಿ.ಎಂ.ಪಿ.
ಬೆಂಗಳೂರು-560073.

FOR CIVIL Pro.

**R KARTHIK RECHAN**
**Authorized Signatory**
**Quality Manager**

CIVIL PRO Sig..... Date..... BANGALORE


*End of Report*

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

**Lab ID** : **CP-RW-2019-03-28-100** **Date: 30-01-19**

**Sample ID** : **0**

## AFTER EXTRACTION - Trail-1

**Total Weight of the Sample(gm)** : 474

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 4 | 4 | 0.8 | 99.2 | 90-100 |
| 9.5 | 62 | 66 | 13.9 | 86.1 | 70-88 |
| 4.75 | 112 | 178 | 37.6 | 62.4 | 53-71 |
| 2.36 | 88 | 266 | 56.1 | 43.9 | 42-58 |
| 1.18 | 29 | 295 | 62.2 | 37.8 | 34-48 |
| 0.6 | 11 | 306 | 64.6 | 35.4 | 26-38 |
| 0.3 | 46 | 352 | 74.3 | 25.7 | 18-28 |
| 0.15 | 45 | 397 | 83.8 | 16.2 | 12-20 |
| 0.075 | 55 | 452 | 95.4 | 4.6 | 4-10 |

## AFTER EXTRACTION - Trail-2

**Total Weight of the Sample(gm)** : 473

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 4 | 4 | 0.8 | 99.2 | 90-100 |
| 9.5 | 62 | 66 | 14.0 | 86.0 | 70-88 |
| 4.75 | 112 | 178 | 37.6 | 62.4 | 53-71 |
| 2.36 | 88 | 266 | 56.2 | 43.8 | 42-58 |
| 1.18 | 29 | 295 | 62.4 | 37.6 | 34-48 |
| 0.6 | 11 | 306 | 64.7 | 35.3 | 26-38 |
| 0.3 | 46 | 352 | 74.4 | 25.6 | 18-28 |
| 0.15 | 45 | 397 | 83.9 | 16.1 | 12-20 |
| 0.075 | 55 | 452 | 95.6 | 4.4 | 4-10 |

**Note:-**

The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

**FOR CIVIL Pro.**

**R KARTHIK RECHAN**
**Authorized Signatory**
**Quality Manager**

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಟಿ. ದಾಸರಹಳ್ಳಿ ಉಪ ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿ.ಬಿ.ಎಂ.ಪಿ.
ಬೆಂಗಳೂರು-560073.

CIVIL PRO Sig..... Date..... BANGALORE



M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
# 4, 7TH MAIN MALLESWARAM, BANGALORE -3

Format No: CP/TF/01

# TEST REPORT ON BITUMEN

| | | | |
|---|---|---|---|
| **Lab ID** | : | **CP-RW-2019-03-28-100** | **Date: 17-01-19** |
| **Customer** | : | Assistant Executive Engineer, T.Dasarahalli Sub Division, BBMP, Bangalore. | |
| **Address** | : | T.Dasarahalli Sub Division, BBMP, Bangalore. | |
| **Project Name** | : | Reserve Found For Emergency Works in Bangalagunte in Ward No.14 | |
| **Agency** | : | Sri.G.N Ramesh, #04, 3rd Main, 7th Cross, Gandhigrama, Maruthi Extension, Bangalore-21 | |
| **Customer's Reference** | : | EE/DD/WO/ /18-19 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Sample Condition** | : | Satisfactory | |
| **Date of Receipt** | : | 16-01-19 | |
| **Sample Type** | : | Bitumen | |
| **Reference to BIS codes** | : | IS: 1201-1220(1978) (Reaffirmed-2004) | |
| **Date of test** | : | 16-01-19 | |

## Test Results

| Sl.no | Name of Test | Result | Requirements as per IS:73-2013 |
|---|---|---|---|
| 1 | Penetration at 25°C , in 1/10th mm | 64 | 60 to 70 |
| 2 | Softening Point, °C | 51.2 | Min. 40°C |
| 3 | Ductility, cm | 98 | Min. 75cm |
| 4 | Flash point, °C | 245 | Min. 220°C |
| | Fire point, °C | 272 | |

**Note:-**

The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಟಿ. ದಾಸರಹಳ್ಳಿ ಉಪ ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿ.ಬಿ.ಎಂ.ಪಿ.
ಬೆಂಗಳೂರು-560073.

**FOR CIVIL Pro.**

**R KARTHIK RECHAN**
Authorized Signatory
**Quality Manager**

CIVIL Pro BANGALORE Sig..... Date.....


****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
# 4, 7TH MAIN MALLESWARAM, BANGALORE -3

# DETERMINATION OF RATE OF SPREAD TACK COAT

| | | |
|---|---|---|
| **Lab ID** | : | **CP-RW-2019-03-28-100** **Date: 29-01-19** |
| **Customer** | : | Assistant Executive Engineer, T.Dasarahalli Sub Division, BBMP, Bangalore. |
| **Address** | : | T.Dasarahalli Sub Division, BBMP, Bangalore. |
| **Project Name** | : | Reserve Found For Emergency Works in Bangalagunte in Ward No.14 |
| **Agency** | : | Sri.C.N Ramesh, #04, 3rd Main, 7th Cross, Gandhigrama, Maruthi Extension, Bangalore-21 |
| **Work Order Ref** | : | EE/DD/WO/ /18-19 |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 28-01-19 |
| **Type of Mix** | : | Tack coat |
| **Date of test** | : | 28-01-19 |

| Sl.No | Determination | Unit | TEST 1 | TEST 2 |
|---|---|---|---|---|
| 1 | Size of Plate (mxm) | Mt | 0.30x .30 | 0.30 x .30 |
| 2 | Area of Plate (a) | Sq.mtr | 0.09 | 0.09 |
| 3 | Initial Wt of empty Plate (b) | Kg | 0.76 | 0.76 |
| 4 | Final weight of plate after application of tack Coat ( c) | Kg | 0.783 | 0.783 |
| 5 | Weight of tack Coat (d=c-b) | Kg | 0.023 | 0.023 |
| 6 | Rate of spread of tack coat | Kg/sq.m | 0.256 | 0.256 |
| 7 | Average | Kg/sq.m | 0.256 | |
| 8 | Specified Limit | Kg/sq.m | 0.250 Kg/sq.m | |

**Note:-**
The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

**FOR CIVIL Pro.**
**R KARTHIK RECHAN**
**Authorized Signatory**
**Quality Manager**

CIVIL Pro Sig..... Date..... BANGALORE

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಟಿ. ದಾಸರಹಳ್ಳಿ ಉಪ ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿ.ಬಿ.ಎಂ.ಪಿ.
ಬೆಂಗಳೂರು-560073.


*End of Report*

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES